23A

Scott M. Matheson
Governor

STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

Marv H. Maxell, Ph.D., Acting Director
Room 474 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS
Community Health Services
Environmental Health
Family Health Services
Health Care Financing

OFFICES
Administrative Services
Community Health Nursing
Management Planning
Medical Examiner
State Health Laboratory

July 29, 1982
533-6146

Mr. Neldon Kunz
Chief Engineer
American Gilsonite Company
P.O. Box 28
Bonanza, Utah 84008

RE: TDS Information

Dear Mr. Kunz:

We have reviewed your March 22, 1982 letter regarding the proposed 1.8 tons/day TDS limit to be included in the new NPDES permit. We do not find the information provided sufficient to justify any change from the 1978 American Gilsonite report.

Your letter also did not present detailed information to indicate that the intercepted water would normally reach the Colorado River System, containment treatment costs, and water useage which would reduce the salt loads.

It is apparent from reviewing our files that a large gap exists on flow quantity and quality data in which to accurately assess the current level of salt discharges. Our best data reflects that 1.8 tons/day is still appropriate and will be used unless additional substantiating data is provided. If possible, information showing compliance with the following guidelines should also be submitted at that time if you desire consideration of any value greater than the 1.8 ton/day limit.

I. In order to preserve supplies of fresh water and to minimize salt loading to the Colorado River, intercepted saline groundwater should be used in lieu of fresh water for industrial processes, dust control, etc. whenever it is environmentally sound and economically feasible.

II. The "no-salt" discharge requirement may be waived at the option of the permitting authority in those cases where the discharge salt load reaching the main stem of the Colorado River is less than one ton per day or 350 tons per year, whichever is less. Flow and TDS data must be presented to substantiate this case. Evaluation will be made on a case-by-case basis.

III. Consideration should be given to the probability that the groundwater, prior to it being intercepted, normally reached the Colorado River System. An industry desiring such consideration must provide detailed information including a description of the topography, geology and hydrology. Such information must include direction of groundwater flow, chemical quality and quantity of groundwater, and the location, quality and quantity of surface streams and springs that might be effected. If the information adequately demonstrates the probability that the intercepted groundwater is or was reaching the river system and contained approximately the same or greater salt load, then the permitting agency may allow exclusion from the "no-salt" discharge policy, assuming no significant localized problems are created.

IV. In those situations where the discharge does not meet the criteria in II or III above, it will be assumed that such discharge will result in some downstream salinity increase and the applicant will be required to submit the following information for consideration:

A. Description of the topography, geology and hydrology. Such information must include the location of the development, direction of groundwater flow, chemical quality and quantity of groundwater, and relevant data on surface streams and springs that are or might be effected.

B. Description of water rights, including diversions and consumptive use quantities.

C. Alternative plans that could reduce or eliminate salt discharge. Alternative plans must include:

(1) Description of alternative water supplies, including provisions for water reuse, if any.

(2) Description of quantity and quality of proposed discharge.

(3) Description of how salts removed from discharges shall be disposed of to prevent their entering surface waters or ground water aquifers.

(4) Technical feasibility of the alternatives.

(5) Construction, operation and maintenance costs.

(6) Costs in dollars per ton of salt removed from the discharge. The use or treatment alternative with the highest salt discharge will be considered to be the base case.

(7) Closure plans to ensure termination of the discharge at the end of the economic life of the project.

(8) The technical, economic and legal practibility of achieving no discharge of salt.

(9) Of the alternatives, a statement as to the one plan for reduction of salt discharge that the applicant recommends be adopted.

(10) Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.

V. In determining whether a waiver from the no salt discharge requirement should be granted, the permit issuing authority shall consider, but not be limited to, the water rights and the technical, economical and legal practicability of achieving no discharge of salt.

VI. Where no-salt discharge is determined not to be practicable the permitting authority shall, in determining permit conditions, consider:

(A) The impact of the total proposed salt discharge of each alternative on the lower mainstem in terms of both tons per year and concentration.

(B) Costs per ton of salt removed from the discharge for each plan alternative.

(C) The compatibility of state water laws for each alternative.

(D) Capability of minimizing salinity discharge.

(E) The localized impact of the discharge.

Please contact Steven McNeal or myself if you have any questions regarding these guidelines. Since we are currently in the process of drafting the permit, your early response would be appreciated.

Sincerely,

Fredrick C. Pehrson, P.E., Chief
Permits and Compliance Section
Bureau of Water Pollution Control

SM:ddr
cc: EPA - Denver - Compliance
Uintah Basin Department of Health

1500